AMENDMENTS TO THE SPECIFICATION

Although the present application contained no paragraph numbers when initially submitted, for ease of description, reference is made to the paragraph numbers listed in Published Application No. US 2003/0154414 A1.

Please replace the title with the following amended title:

MAGNETIC STRIPE READER ~~FOR PDA ATTACHMENT~~ ATTACHABLE TO A PERSONAL DIGITAL ASSISTANT AND METHOD OF MAKING SAME

Please replace paragraph [0030] with the following amended paragraph:

[0030] Referring first to **Fig. 1**, a typical personal digital assistant ("PDA") **10** is shown including an attached manual magnetic stripe card reader **20**[[,]] constructed in accordance with a first embodiment of the present invention ~~in place~~. In general, a PDA is defined as any type of handheld device that combines computing, wireless communication, and networking features and that includes a data display, a synchronization port, and the capability to exchange data with a personal computer by means of a so-called hot sync function. A PDA is generally provided with a detachable PDA cradle that not only functions as a resting place for the PDA, but that also enables the PDA to hot sync with a personal computer through the synchronization port of the PDA and through suitable connectors in the PDA cradle. ~~The personal digital assistant (PDA) attached manual~~ The magnetic stripe reader ("MSR") **20** attachable to the PDA **10** includes novel PDA electrical power source management functions, and functions to read the magnetic stripe **12** located on typical cards **14** such as credit cards, ~~and drivers~~ driver licenses, etc. In operation, when the card reader or MSR **20** is attached to the PDA, the magnetic stripe card **14** can be swiped in either direction (as shown by arrows) to read and decode the data and information stored on the magnetic stripe **12**, and send it to the PDA **10** for processing.

Please replace paragraph [0031] with the following amended paragraph:

[0031] Referring now to **Fig. 2**, again here is illustrated a typical PDA **10** with the attachable manual magnetic stripe card reader **20** only partially connected. This figure

clearly shows how the attachable manual magnetic stripe card reader **20** constructed in accordance with the present invention is readily attached and detached from the typical PDA **10**. An arrow indicates the direction in which the attachable manual magnetic stripe card reader **20** is mounted onto a PDA **10**. The attachable manual magnetic stripe card reader unit **20** slides into place guided by integrally formed side members **22** and **24**, and when fully mounted, is held securely to the PDA by retaining tab **26**. In addition, slide guides **32** and **34**, molded into the lower portion of the attachable manual magnetic stripe card reader **20** unit, act to guide the PDA **10** properly into place and secure it there while the attachable manual magnetic stripe card reader **20** is fully mounted for use. Electric power is transferred from the PDA **10** to the MSR **20** through the PDA synchronization port, and data is also exchanged between the MSR **20** and the PDA **10** through the PDA synchronization port. In the illustrated embodiment, the MSR **20** is provided with a housing that is shaped like a cradle retaining at least a portion of the PDA **10** and fitting between the PDA **10** and the PDA cradle. Said housing comprises a first connector connected to the PDA synchronization port and a second connector connected to the PDA cradle, so that the PDA **10** can maintain hot sync capabilities with a personal computer even when the MSR **20** is interposed between the PDA **10** and the PDA cradle. A wireless personal identification number pad ("PIN pad") may be connected to the MSR **20**, enabling a user to enter a personal identification number to complete a transaction. In a different embodiment, the PIN pad is not a component that is separate from the MSR **20**, but is built instead into the housing of the MSR **20**, becoming an integral part thereof.

Please replace paragraph [0032] with the following amended paragraph:

[0032] Referring now to **Fig. 3**, a ~~PDA cradle port interface and power routing~~ schematic diagram **40** is shown detailing the interfaces between the MSR **20**, the PDA **10**, and the PDA cradle. In describing this embodiment, reference will be made to a serial port, although other types of synchronous ports may be employed. Depending on the particular PDA being used and its existing state of operation, electrical power may be available at any one of a number of pins. In addition to the various locations of the power source, each pin is limited to the amount of current it can supply. The method of current limitation employed in most typical PDA's takes the form of a 300 ohm in series resistor. The most notable departure from this convention is the HandEra 330, which uses 440 ohm limiting resistors. Either the Vcc or

DTR pin supplies 3V when the unit is off depending on the PDA model. When the PDA is powered on some models do not change the status of any pin others set both the Vcc and DTR pin to 3V. When the serial communications port is enabled by the PDA, the DTR and RTS pins are set to between 5V and 7V, depending upon the unit and the battery voltage. These voltages are with no current being drawn from the pin. Both the Vcc and DTR pins can supply approximately ~~2MA~~ 2 mA at 2V with the unit off. With the PDA powered on the available voltage and current increases slightly. To cope with all of these possible power limitations three ~~Shottky~~ Schottky diodes are used to route trickle charge voltage to a temporary storage device. These diodes are used to prevent different supply voltages within the PDA from being connected together causing increased current drain and possible adverse operation effects. In this embodiment, the storage device is a large value capacitor made from placing 6 smaller capacitors in parallel. In another embodiment, the ~~Shottky~~ Schottky diodes are replaced with low voltage drop transistors. In an alternate embodiment, when the selection of PDA's is limited the diodes are replaced with direct connections. In either embodiment, the MSR may be designed to operate with a maximum power consumption of 2 mA while reading and decoding data, and of 300 μA in an idle state.

Please replace paragraph [0034] with the following amended paragraph:

[0034] Referring now to **Fig. 5**, a 3V to 5V power converter schematic diagram **60** is illustrated. During a card read operation some of the circuit components require 5V to function properly. During low power operation 3V is sufficient to operate the required circuit subset. A regulated charge pump converter is used to generate the 5V from the 3V source supplied by the power storage device. A ~~Shottky~~ Schottky diode is used to bypass the charge pumps supply input voltage to output to supply approximately 3V to VDIG when the +5V_EN* is disabled. The micro-controller/microprocessor as shown in **Fig. 10** (see below) enables the charge pump under software control. When enabled the processor Vcc is also switched from 3V to 5V. In an alternate embodiment, the processor and memory are always run at 3V and only the RS232 output devices are run at 5V. This novel design is able to switch between the 3V and 5V states in 40 micro-seconds which is required to accept the card data.

Please replace paragraph [0035] with the following amended paragraph:

[0035] Referring to **Fig. 6**, an RS232 negative supply converter schematic diagram **70** is shown. Typical PDA's do not operate as conventional RS232 serial devices. Due to high current consumption by the serial port when active, they are disabled when not being used. The negative voltage generator for RS232 compatibility must be a greater (or more) negative than minus 4 volts. [[A]] An inverting charge pump is used to supply the negative supply voltage. It is disabled until the RTS input RS232 signal is set true by the PDA. In this way, current is used by the RS232 drivers only when the PDA has enabled its serial port.

Please replace paragraph [0039] with the following amended paragraph:

[0039] Referring to **Fig. 10**, a micro-controller/microprocessor and serial memory device schematic diagram **110**, constructed in accordance with the present invention, is shown. This ~~micro-controller/microprocessor and serial memory device~~ processor/memory module and controls the operation of the MSR. The serial memory device stores card data during the read and decode process. It can also be used to track format information along with data from previous cards read. The serial memory device maybe a single circuit, or multiple circuits to increase the storage size. It may also be removable from the MSR for data logging applications. AMP_T1, AMP_T2, and AMP_T3 are the outputs of the respective head amplifiers and peak detectors. The Manchester encoded data on the magnetic stripe is first converted into binary, then into one of multiple secondary formats, by the micro-controller. ISO 7811 describes two formats one being a 6 bit with a parity bit uppercase alpha-numeric, and the other being a 4 bit with a parity bit numeric. Some US ~~drivers~~ driver licenses and identification cards use a 6 bit no parity uppercase alpha-numeric. In each case, multiple formats are available for decoding the track data by the micro-controller. In addition to various data bit formats, each US state ~~drivers~~ driver licenses and identification cards has one or more different data formats for the card information. The serial memory can contain a table of information such as the location of age and physical information for each state. The MSR can detect the state of issuance and then parse the desired data, such as age, prior to sending the information to the PDA. In this way, the PDA application does not need to understand and maintain information on how each of the 50 states formats their ~~drivers license~~ driver licenses or identification card data. Moreover, these format tables can also be used in other applications, such as the medical field, to convert multiple card data formats between different patient identity cards to one standard format used by the PDA application.

Further, the processor/memory module may be capable of uploading software that can be installed in the field, such as software that is specific for age verification, or of being programmed to verify the authenticity of the magnetic stripe data before such data is sent to the PDA. Also, the processor/module may be capable of encrypting the data exchanged with the PDA prior to storing such data in the PDA and prior to transmitting such data to a processing agency, so that a PDA operator is unable to read any sensitive data stored on the magnetic stripe. When the MSR comprises a PIN pad, the transmission to the PDA of the any personal identification numbers digitized into the PIN pad may be prevented.

Please add the following new paragraph after paragraph [0039]:

[0039.1] In a different embodiment, a second removable processor/module module may be present, that can be inserted in a corresponding external slot in the MSR and that is capable of storing different data formats and software.

Please replace paragraph [0041] with the following amended paragraph:

[0041] Referring finally to **Fig. 12** a flow chart of the software operation for multiple data formats is shown. The MSR is in a low power down mode until track two data causes the micro-controller to initiate a read operation. The F2F Manchester encoded data for all tracks is read and stored. The read operation is considered complete when no new F2F input is received within ~~18MS~~ 18 ms. The stored data is then read and converted to a binary format and stored. Each track of binary data is then processed with each successive entry in the track format table until a no error condition or the table end is encountered. The formatted data or an error condition is stored for the track and the next track is processed. After all tracks are processed using the data format table the optional parsing table is used to parse data to specific applications. One such application is for age verification. In this application, the parsing consists of US state ~~drivers~~ driver license and ID card parsing rules. These rules select the state of issuance of the identification card, and then the data fields specific to the applications needs, such as birth date and physical characteristics. This data is then formatted in one or more standard output formats and sent to the PDA. The output format table can also be used to encode any sensitive data prior to transmission.